

December 14, 1952

Dr. P. R. Edwards
Communicable Diseases Center
Box 185, Chamblee, Ga.

Dear Dr. Edwards:

Thank you for the confirmed diagnoses, and cultures #6 and N25 which have arrived in good order.

I am afraid I must now make additional requests. I have reached about a halfway point in genetic studies of phase variation. In the system typhimurium -x abony, the product depends quite definitely on the phase ~~in~~ which the typhimurium displayed when the FA was made from it. TyM i gives i:enx, almost exclusively, while TM 1,2 gives almost all b:1,2. The next question is the role of the recipient phase in determining this output. S. abony (#103) is unsatisfactory for this purpose, as it has quite a high rate of phase variation. For this experiment, phase stability is very important, but I do not wish to use monophasic strains at this point to study the mechanism of diphasic variation. As I wish to continue with typhimurium as the source of FA, for various reasons, ~~various~~ good technical reasons point to stocks such as abony, which have a,b,... in the first phase, and and enx or enz₁₅ for the second. Finally, not every Salmonella culture will respond to the phages we now have.

The existing serotypes which may fill the bill are abony, ~~knowledoxy~~ bispebjerg, abortus-bovis, and durban. S. brandenburg, dar es salaam, gpettingen or javiana might also work, but I would need some 1 serum along with the cultures. I do not know how many isolates of these you are likely to have in addition to those in the 1942 list. It would save me considerable effort if it were possible to weed out those already known to be more than ordinarily phase-variable. The kind of culture I need resembles; S. typhimurium LT-2 in giving the alternative phase very readily with serum selection, but in being substantially pure by single colony tests. I should be grateful for any number of isolates of these types, and whatever information on their phase stability you may have. I already have your listed abony, 103, of course, but not the others mentioned.

Spicer is now getting on with his studies on somatic antigen transductions. So far there have not been any definite results (except that huge quantities of serum are consumed), but in anticipation of success I wonder if I might ask for S. bredeney and S. schlössheim, and a few ml. of V and XXVII serums. At this point, may I ask whether it would be all right for Spicer to join us for a few days during our forthcoming visit (Feb. 1 to 10 days). He will be en route back to England (the Central Public Health Lab. at Colindale), but would like very much to spend a short time visiting your lab. while we are there.

Sincerely,

Joshua Lederberg